IFW AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: David J. Najewicz et al.	§	Group Art Unit:	3749
Serial No.: 10/814,722	§	Examiner:	Cocks, Josiah C.
Filed: March 31, 2004	§		
For: ENHANCED BURNER PERFORMANCE GAS RANGE SYSTEM AND METHOD	§	Atty. Docket:	135091-1/YOD/WOL GERD:0111

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

September 5, 2006	Seanelle Dice
Date	

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 41.31 AND 41.37

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on June 19, 2006, and received by the Patent Office on June 22, 2006 and the Panel Decision mailed on August 3, 2006.

The Commissioner is authorized to charge the requisite fee of $500.00, and any additional fees which may be necessary to advance prosecution of the present application, to Account No. 07-0868, Order No. 135091-1/YOD (GERD:0111).

1. REAL PARTY IN INTEREST

The real party in interest is General Electric Company the Assignee of the above-referenced application by virtue of the Assignment to General Electric Company, recorded at reel 015181, frame 0565, and dated March 31, 2004. Accordingly, General

Electric Company, will be directly affected by the Board's decision in the pending appeal.

2. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal.

3. STATUS OF CLAIMS

Claims 1-39 are currently pending, are currently under final rejection and, thus, are the subject of this Appeal.

4. STATUS OF AMENDMENTS

Appellants have not submitted any amendments subsequent to the Final Office Action mailed on April 21, 2006. Consequently, there are no outstanding amendments to be considered by the Board.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates generally to a gas range system and, more particularly, to enhancement of burner performance of a gas range system for a cooking appliance. *See* Application, page 1, paragraph 1. Specifically, in accordance with one aspect of the present invention, the gas range system includes a pressure regulator adapted to regulate a gas flow from a gas feed line. *See id.* at page 3, paragraph 8. The system further includes a gas fuel boost pump disposed downstream of the pressure regulator and adapted to increase pressure of the gas flow received from the gas feed line. *See id.* A gas burner is disposed to receive the gas flow from the gas fuel boost pump. *See id.*

In accordance with another aspect of the present invention, a method of enhancing performance of a gas burner is disclosed and claimed. *See id.* at page 3, paragraph 9. The method comprising actively increasing a pressure of a gas flow through a gas feed

line via a gas fuel boost pump, and regulating the gas flow of the gas fuel boost pump based upon a user-defined input to achieve a desired burner output. *See id.*

The Application contains five independent claims, namely, claims 1, 11, 22, 29 and 34, all of which are the subject of this Appeal. The subject matter of these claims is summarized below.

With regard to the aspect of the invention set forth in independent claim 1, discussions of the recited features of claim 1 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with the present invention relates to an enhanced gas range system (*e.g.*, 10). The system includes a pressure regulator (*e.g.*, 14) adapted to regulate a gas flow from a gas feed line apparatus (*e.g.*, 12). *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. Further, the system includes a gas fuel boost pump (*e.g.*, 18) disposed downstream of the pressure regulator (*e.g.*, 14) and adapted to increase pressure of the gas flow received from the gas feed line (*e.g.*, 12). *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. The system further includes a gas burner (*e.g.*, 32) disposed to receive the gas flow from the gas fuel boost pump (*e.g.*, 18). *See, e.g., id.* at pages 5-6, paragraph 21; *see also,* FIG. 1-3.

With regard to the aspect of the invention set forth in independent claim 11, discussions of the recited features of claim 11 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with the present invention relates to an enhanced gas range system (*e.g.*, 10). The system includes a pressure regulator (*e.g.*, 14) adapted to regulate gas flow from a gas feed line (*e.g.*, 12). *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. Further, the system includes a gas fuel boost pump (*e.g.*, 18) placed downstream of the pressure regulator (*e.g.*, 14) and adapted to increase a pressure of the gas flow received from the gas feed line (*e.g.*, 12). *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. Moreover, the system includes a gas burner (*e.g.*, 32) disposed to receive the gas flow

from the gas fuel boost pump (*e.g.*, 18). *See, e.g., id.* at pages 5-6, paragraph 21; *see also,* FIG. 1-3. The system further includes a transducer (*e.g.*, 46) disposed upstream of the gas burner (*e.g.*, 32) and adapted to measure a parameter of gas flow from the gas fuel boost pump (*e.g.*, 18) pressure at a predetermined location. *See, e.g., id.* at page 6, paragraph 23; *see also,* FIG. 2.

With regard to the aspect of the invention set forth in independent claim 22, discussions of the recited features of claim 22 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with the present invention relates to a method of enhancing performance of a gas burner (*e.g.*, 32), having a gas as fuel. *See, e.g., id.* at page 9, paragraph 32. The method includes actively increasing pressure of a gas flow through a gas feed line (*e.g.*, 12) via a gas fuel boost pump (*e.g.*, 18) disposed downstream of a pressure regulator (*e.g.*, 14) coupled to the gas feed line. *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. Further, the method includes regulating the gas flow of the gas fuel boost pump (*e.g.*, 18) based upon a user-defined input (*e.g.*, 20) to regulate a burner heat output to a desired burner output. *See, e.g., id.* at pages 4-5, paragraph 18; *see also,* FIG. 1-3.

With regard to the aspect of the invention set forth in independent claim 29, discussions of the recited features of claim 29 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with the present invention relates to a method of enhancing a gas burner (*e.g.*, 32) performance. *See, e.g., id.* at page 9, paragraph 32. The method includes increasing pressure of a current gas flow through a gas feed line (*e.g.*, 12) via a gas fuel boost pump (*e.g.*, 18) disposed downstream of a pressure regulator (*e.g.*, 14) coupled to the gas feed line. *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. Further, the method includes measuring a parameter of gas flow from the gas fuel boost pump at a predetermined location via a transducer. *See, e.g., id.* at pages 8-9, paragraph 29; *see also,* FIG. 5. The method further includes regulating the gas flow through the gas fuel boost pump (*e.g.*, 18) based upon a user-defined input (*e.g.*, 20) and a signal received

from the transducer (*e.g.*, 46). *See, e.g., id.* at page 6, paragraph 23; *see also,* FIG. 2 and 5.

With regard to the aspect of the invention set forth in independent claim 34, discussions of the recited features of claim 34 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with the present invention relates to system for enhancing primary air entrainment in a gas burner. The system includes a pressure regulator (*e.g.*, 14) adapted to regulate a gas flow from a gas feed line (*e.g.*, 12). *See, e.g., id.* at page 4, paragraph 16; *see also,* FIG. 1-3. Further, the system includes a gas fuel boost pump (*e.g.*, 18) disposed downstream of the pressure regulator (*e.g.*, 14) and adapted to increase primary air entrainment (*e.g.*, 40) of the gas flow received from the gas feed line (*e.g.*, 12). *See, e.g., id.* at page 4, paragraph 16 and page 9, paragraph 31; *see also,* FIG. 1-3. The system further includes a gas burner (*e.g.*, 32) disposed for receiving the gas flow from the gas fuel boost pump (*e.g.*, 18). *See, e.g., id.* at pages 5-6, paragraph 21; *see also,* FIG. 1-3.

A benefit of the invention, as recited in these claims, is the enhancement of burner performance of a gas range system for a cooking appliance. As described in the specification, the present application includes a gas fuel boost pump disposed downstream of the pressure regulator and configured to increase pressure of a gas flow received from the gas feed line. *See, e.g., id.* at page 4, paragraph 16. The gas fuel boost pump may be a variable speed pump, wherein the flow of gas through the gas fuel boost pump is controlled by controlling the speed of the pump. *See, e.g., id.* at page 4, paragraph 17. Alternatively, the gas fuel boost pump may be a variable displacement pump where the flow of gas through the gas fuel boost pump may be controlled by controlling the displacement of the pump. *See, e.g., id.* at page 4, paragraph 17. Flow control circuitry coupled to the gas fuel boost pump regulates the gas flow through the gas fuel boost pump. *See, e.g., id.* at page 4, paragraph 16. Thus, the invention offers a gas range system that has enhanced burner performance achieved through primary aeration of the burner, while satisfying industry standards for emissions and fabric

ignition. The system increases the delivery pressure to the gas orifice and venturi assembly for improving the primary air entrainment, while maintaining control of the burner power output via controlled gas flow to the gas burner system.

A further benefit of the invention, as recited in these claims, is enhanced performance of a gas burner via regulating the gas flow of the gas fuel boost pump based upon a user-defined input in order to regulate a burner heat output to a desired burner output. *See id.* at page 3, paragraph 9. The gas fuel boost pump is coupled to the flow control circuitry that is configured to regulate the gas flow through the gas fuel boost pump based on user-defined inputs. *See id.* at pages 3-4, paragraph 18. Further, the flow control circuitry includes an interface, a controller and a memory device. *See id.* The interface is configured to receive the user-defined input and transmit a signal representative of the user-defined input to the controller. *See id.* According to one embodiment, the user-defined input is a desired burner output. *See id.* The user input may be provided by a user of the gas range system via an input system for example, a knob control system, a touch control system and so forth. *See id.* Thus, the system provides the benefit of controlling the flow of the fuel to the burner, based on user-defined input in order to regulate a burner heat output to a desired burner output. The method is accomplished in part by actively increasing pressure of a gas flow through a gas feed line to enhance primary air entrainment in a gas burner.

These are clear differences and distinctions from the prior art, as discussed below.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Ground of Rejection No. 1:

Appellants respectfully urge the Board to review and reverse the Examiner's ground of rejection in which the Examiner rejected claims 1-4, 6-9, 11-14, 16-20 and 22-39 under 35 U.S.C. §103(a) as being unpatentable by Rothenberger et al. (U.S. Patent No. 6,287,108; hereinafter "Rothenberger") in view of Adams et al. (U.S. Patent No. 6,178,997; hereinafter "Adams").

B. **Ground of Rejection No. 2:**

Appellants respectfully urge the Board to review and reverse the Examiner's ground of rejection in which the Examiner rejected dependent claims 5 and 15 under 35 U.S.C. §103(a) as being unpatentable over Rothenberger in view of Adams and further in view of Smith (U.S. Patent No. 5,795,998; hereinafter "Smith").

C. **Ground of Rejection No. 3:**

Appellants respectfully urge the Board to review and reverse the Examiner's ground of rejection in which the Examiner rejected dependent claims 10 and 21 under 35 U.S.C. §103(a) as being unpatentable over Rothenberger in view of Adams and further in view of Schaupert (U.S. Patent No. 5,024,209; hereinafter "Schaupert").

7. **ARGUMENT**

As discussed in detail below, the Examiner has improperly rejected the pending claims. Further, the Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under Section 103. Accordingly, Appellants respectfully request full and favorable consideration by the Board, and reversal of the outstanding rejections. Appellants strongly believe that claims 1-39 are currently in condition for allowance.

A. **Ground of Rejection No. 1:**

The independent claims 1, 11, 22, 29, and 34 recite, in generally similar language, the gas range system *including gas fuel boost pump disposed downstream of the pressure regulator* and configured to *increase pressure* of a gas flow received from the gas feed line.

In the Final Office Action, the Examiner argued that Rothenberger discloses a method of enhancing burner performance in a gas range system that includes a pressure regulator in the form of actuating device with valve to regulate gas flow through a gas feed line. *See* Final Office Action, page 3. The Examiner acknowledged that

Rothenberger does not disclose the use of gas fuel boost pump. *See id.* at page 4. However, the Examiner relied upon Adams to teach a variable speed pump for regulation of fluid flow to a gas burner. *See id.* at page 4.

Furthermore, the Examiner argued that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the valve of Rothenberger to incorporate the variable speed pump taught by Adams for the purpose of controlling the amount of fluid distribution. *See id.* at page 5.

1. **Neither of the references teaches a gas fuel boost pump disposed downstream of the pressure regulator.**

Rothenberger discloses an actuating device for *varying the gas flow* through a gas feed line as a function of the controlled variable supplied by closing or opening the gas valve accordingly. *See* Rothenberger, col. 6, lines 55-63. Further, Adams teaches a control element such as a valve, or a variable speed drive or a pump. *See* Adams, col. 1, lines 29-31. Neither of the references teaches *a gas fuel boost pump disposed downstream of the pressure regulator* to boost the pressure of the gas flow. Moreover, the replacement proposed by the Examiner *would not result* in such an arrangement.

The Examiner argued that Adams discloses the pump as being the final portion of the control loop and, therefore, that this variable speed pump is downstream of the pressure regulator of the control system. *See* Final Office Action, page 6. Further, the Examiner argued that Rothenberger discloses a valve in addition to a pressure regulator, and cited Fig. 1 of Rothenberger in support of this position. *See id.* at page 7. In addition, the Examiner argued that Adams teaches that valve (12) is a component in addition to a pressure regulator (11), and cited Fig. 3 of Adams in support of this position. *See id.* at page 7.

Appellants respectfully submit that, in fact, Rothenberger *does not* disclose a valve in addition to a pressure regulator. Rothenberger teaches an actuating device that

includes electromotive gas valve 4 arranged in the gas feed line, and an electric servomotor as an actuator. *See* Rothenberger, col. 6, lines 55-63. Further, Adams does not disclose a valve or a pump *in addition to* a pressure regulator. Fig. 3 of Adams teaches a self operating regulator (11) that includes a *body (12)* that comprises a fluid inlet, a fluid outlet, and a flow passage connecting the inlet and outlet. *See* Adams, col. 6, lines 36-40.

Appellants respectfully submit that Adams teaches the pressure regulator to be a control system that combines a process sensor, a controller, and a v*alve* into a single unit. *See* Adams, col. 1, lines 31-33. Further, Adams teaches that it is well known in many situations to which pressure regulators could be applied, control valves are used *instead*. *See* Adams, col. 3, lines 48-49.

The present invention provides for enhancing performance of a gas burner by increasing primary air entrainment of the gas flow received from the gas feed line. In particular, the primary air entrainment is increased via increasing the pressure of the gas flow by a pump that is disposed downstream of the pressure regulator. As can be seen, Rothenberger and Adams, even in combination do not teach such an arrangement.

2. **Modification proposed by Examiner would replace the pressure regulator of Rothenberger with a pump**.

Following the alternative teachings of Adams (*i.e.*, that some regulator could be replaced with a pump), the modification proposed by the Examiner would effectively *replace* the pressure regulator of Rothenberger with a pump. Appellants first point out that such replacement would result in a system with a pump and no upstream regulator, while *both* are required by the current claims.

Appellants further submit that such pressure regulators are well known and used for pressure control and to maintain a desired, ***reduced outlet pressure*** in fluid distribution applications and the process industries. *See* Adams, col. 1, lines 32-40.

Therefore, even in combination, Rothenberger and Adams do not teach increase in pressure of the gas flow downstream of the pressure regulator. Thus, the combination of Rothenberger and Adams cannot support a *prima facie* case of obviousness. Therefore, Appellants submit that independent claims 1, 11, 22, 29, and 34 are allowable over the proposed combination, and respectfully request that the rejection of claims under 35 U.S.C. 103(a) be reversed. Claims 2-4, 6-9, 12-14, 16-20, 23-28, 30-33, and 35-39 depend from independent claims 1, 11, 22, 29, and 34, respectively. Appellants respectfully submit that insomuch as independent claims 1, 11, 22, 29, and 34 are allowable, these claims are allowable at least by virtue of their dependence from an allowable base claim.

B. **Ground of Rejection No. 2:**

In the Final Office Action, the Examiner acknowledged that Rothenberger does not disclose the use of a variable speed or displacement pump and relied on Smith to teach this element. *See* Final Office Action, page 5. Notwithstanding, Appellants submit that Smith does not obviate the deficiencies of Rotherberger and Adams discussed above. In particular, Smith does not teach *a gas fuel boost pump disposed downstream of the pressure regulator* to boost the pressure of the gas flow. Therefore, Appellants submit that because claims 5 and 15 depend directly or indirectly from allowable claims 1 and 11, they are allowable at least by virtue of their dependency from an allowable base claim.

C. **Ground of Rejection No. 3:**

In the Final Office Action, the Examiner argued that Rothenberger and Adams teach all the limitations of claims 10 and 21 except for a throttling valve for each burner. *See* Final Office Action, page 6. Notwithstanding, Appellants submit that Schaupert does not obviate the deficiencies of Rotherberger and Adams discussed above. In particular, Schaupert does not teach *a gas fuel boost pump disposed downstream of the pressure regulator* to boost the pressure of the gas flow. Therefore, Appellants submit that

because claims 10 and 21 depend directly or indirectly from allowable claims 1 and 11, they are allowable at least by virtue of their dependency from an allowable base claim.

Appellants respectfully submit that all pending claims are in condition for allowance. However, if the Examiner or Board wishes to resolve any other issues by way of a telephone conference, the Examiner or Board is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: 9/5/06

Scott E. Woloson
Reg. No. 57,082
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545

8. APPENDIX OF CLAIMS ON APPEAL

Listing of Claims:

1. An enhanced gas range system comprising:

a pressure regulator adapted to regulate a gas flow from a gas feed line;

a gas fuel boost pump disposed downstream of the pressure regulator and adapted to increase pressure of the gas flow received from the gas feed line;

and a gas burner disposed to receive the gas flow from the gas fuel boost pump.

2. The system of claim 1, further comprising flow control circuitry coupled to the gas fuel boost pump for regulating the gas flow through the gas fuel boost pump based upon a user-defined input.

3. The system of claim 2, the flow control circuitry comprising a controller that calculates the desired gas flow based upon the user-defined input and transmits a signal for regulating the gas flow of the gas fuel boost pump.

4. The system of claim 1, wherein the gas fuel boost pump is a variable speed pump.

5. The system of claim 1, wherein the gas fuel boost pump is a variable displacement pump.

6. The system of claim 1, further comprising at least one orifice coupled to the gas burner and adapted to direct gas into the gas burner.

7. The system of claim 6, the gas burner comprising a venturi located downstream of the orifice for primary air entrainment through mixing gas and air.

8. The system of claim 1, the gas burner further comprising a plurality of burner ports for secondary air entrainment.

9. The system of claim 1, wherein the gas fuel boost pump is coupled to a plurality of gas burners for increasing primary air entrainment of the gas flow.

10. The system of claim 9 further comprising a throttling valve coupled to each of the plurality of the gas burners, the throttling valve being adapted to control individual gas flow for each burner.

11. An enhanced gas range system comprising:

a pressure regulator adapted to regulate gas flow from a gas feed line;

a gas fuel boost pump placed downstream of the pressure regulator and adapted to increase a pressure of the gas flow received from the gas feed line;

a gas burner disposed to receive the gas flow from the gas fuel boost pump; and

a transducer disposed upstream of the gas burner and adapted to measure a parameter of gas flow from the gas fuel boost pump pressure at a predetermined location.

12. The system of claim 11, further comprising flow control circuitry coupled to the gas fuel boost pump and the transducer for regulating the gas flow through the gas fuel boost pump based upon a user-defined input and a signal received from the transducer.

13. The system of claim 12, the flow control circuitry further comprising a controller that calculates the desired gas flow based upon the user-defined input and the signal received from the transducer, and wherein the controller transmits a signal for regulating the gas flow of the gas fuel boost pump.

14. The system of claim 11, wherein the gas fuel boost pump is a variable speed pump.

15. The system of claim 11, wherein the gas fuel boost pump is a variable displacement pump.

16. The system of claim 11, further comprising at least one orifice coupled to the gas burner and adapted to direct gas into the gas burner.

17. The system of claim 16, the gas burner further comprising a venturi located downstream of the orifice for primary air entrainment through mixing gas and air.

18. The system of claim 11, the gas burner further comprising a plurality of burner ports for secondary air entrainment.

19. The system of claim 11, wherein the predetermined location is upstream of the orifice.

20. The system of claim 11, the gas fuel boost pump is coupled to a plurality of gas burners for increasing primary air entrainment of the gas flow.

21. The system of claim 20 further comprising a throttling valve coupled to each of the plurality of the gas burners wherein, the throttling valve is adapted to control the individual gas flow for each burner unit.

22. A method of enhancing performance of a gas burner, having a gas as fuel comprising:

actively increasing pressure of a gas flow through a gas feed line via a gas fuel boost pump disposed downstream of a pressure regulator coupled to the gas feed line; and

regulating the gas flow of the gas fuel boost pump based upon a user-defined input to regulate a burner heat output to a desired burner output.

23. The method of claim 22, wherein regulating the gas flow comprises receiving the user-defined input, calculating a desired flow value and transmitting a signal representative of the desired flow value to the gas fuel boost pump.

24. The method of claim 22, wherein the user-defined input is a type of gaseous fuel.

25. The method of claim 24, wherein the gaseous fuel is natural gas.

26. The method of claim 24, wherein the gaseous fuel is propane.

27. The method of claim 22, wherein the user-defined input is an altitude of a place of installation of a gas range system.

28. The method of claim 22, wherein the user-defined input is a required burner output power.

29. A method of enhancing a gas burner performance comprising:

increasing pressure of a current gas flow through a gas feed line via a gas fuel boost pump disposed downstream of a pressure regulator coupled to the gas feed line ;

measuring a parameter of gas flow from the gas fuel boost pump at a predetermined location via a transducer; and

regulating the gas flow through the gas fuel boost pump based upon a user-defined input and a signal received from the transducer.

30. The method of claim 29, wherein the gas burner is coupled to at least one orifice adapted to direct the gas into the gas burner.

31. The method of claim 29, wherein measuring a parameter of gas flow comprises detecting a pressure difference in the predetermined location via a pressure transducer.

32. The method of claim 29, wherein the predetermined location is upstream of an orifice.

33. The method of claim 29, wherein regulating gas flow further comprises calculating a desired flow value based on the user-defined input and the signal from the transducer, and transmitting a signal for regulating the desired flow value to the gas fuel boost pump.

34. A system for enhancing primary air entrainment in a gas burner comprising:

a pressure regulator adapted to regulate a gas flow from a gas feed line;

a gas fuel boost pump disposed downstream of the pressure regulator and adapted to increase primary air entrainment of the gas flow received from the gas feed line; and

a gas burner disposed for receiving the gas flow from the gas fuel boost pump.

35. The system of claim 34, wherein the gas fuel boost pump is adapted to increase a pressure of the gas flow to increase the primary air entrainment of the gas flow.

36. The system of claim 34, further comprising flow control circuitry coupled to the gas fuel boost pump for regulating the gas flow through the gas fuel boost pump based upon a user-defined input.

37. The system of claim 36, the flow control circuitry comprising a controller that calculates the desired gas flow based upon the user-defined input and transmits a signal for regulating the gas flow of the gas fuel boost pump to increase the primary air entrainment of the gas flow.

38. The system of claim 34, further comprising at least one orifice coupled to the gas burner and adapted to direct gas into the gas burner.

39. The system of claim 38, the gas burner comprising a venturi located downstream of the orifice for primary air entrainment through mixing gas and air.

9. EVIDENCE APPENDIX

None.

10. RELATED PROCEEDINGS APPENDIX

None.